© 2010. All rights reserved. Black Box Corporation.

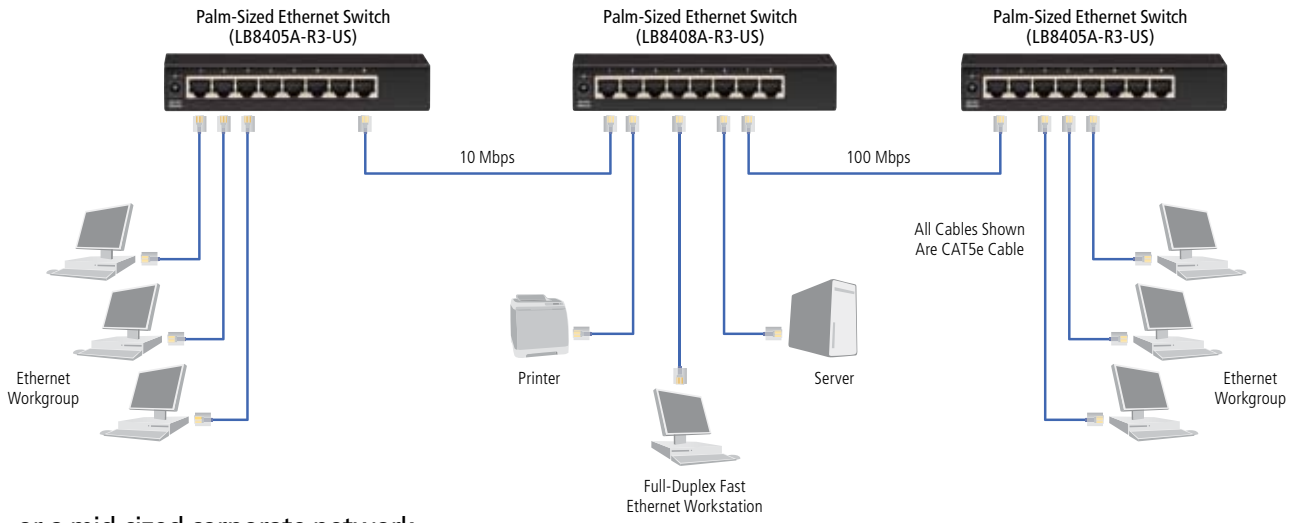
Palm-Sized Ethernet Switches

Choose these switches for flexible, affordable, managed dual-speed Ethernet switching with uplinks.

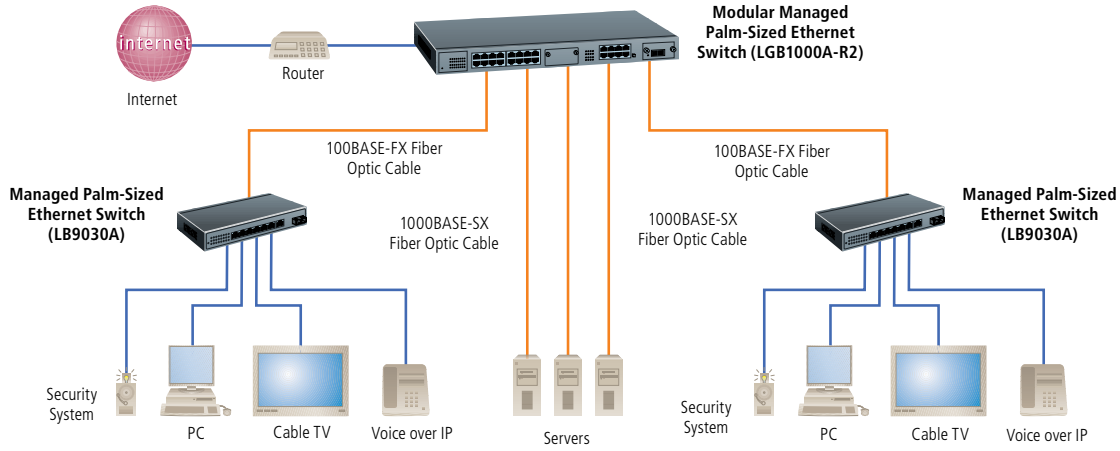
FEATURES

- Compact size saves valuable space in cramped offices and workspaces.
- Plug-and-play installation makes network integration easy—even for amateurs!
- 10-/100-Mbps autonegotiating and autosensing copper ports plus optical 100-Mbps fiber uplink ports make them a solid choice for migrating to Fast Ethernet.
- Auto MDI/MDI-X on all copper ports eliminates the need for crossover cables.
- Nonblocking switch architecture makes these units ideal for video and other data-intensive applications.
- Store-and-forward switching technology reduces error packet propagation.
- Get the 5-port model for smaller workgroups; get the 8-port model for larger workgroups.
- Choose a 100–240-VAC external power supply or a 110-VAC wallmount power supply.
- Managed models integrate easily into SNMP-managed networks.

The Palm-Sized Ethernet Switch supports a small office network…



…or a mid-sized corporate network.



OVERVIEW

Add high-speed fiber connection or just add more copper ports to your network. The versatile family of Palm-Sized Ethernet Switches offers a range of options to suit any small-to-mid-sized network.

Palm-Sized Ethernet Switches are compact so they tuck unobtrusively into small spaces on shelves or behind PCs on desktops. All Palm-Sized Ethernet Switches enable full-wire speed forwarding.

They also provide backpressure and IEEE 802.3x-compliant flow control. The switches comply with other Ethernet standards, too, including IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, and 100BASE-FX.

Unmanaged Palm-Sized Ethernet Switches

Use these simple switches for smaller networks that don't require managment. Because they feature autosensing 10/100 ports, these Unmanaged Palm-Sized Ethernet Switches are ideal for integrating legacy 10-Mbps networks with 100-Mbps Fast Ethernet. The switches can also function as bridges to extend the distance between two 100-Mbps network segments.

Plug-and-play installation makes setting up easy. The switches autosense speed and duplex, and Auto MDI/MDI-X on all copper ports eliminates the need for crossover cables. Just plug in the switch and it knows how to connect. Plus, you can run 10- and 100-Mbps speed and half- or full-duplex transmission modes simultaneously on the same switch.

Models with fiber have either an ST or SC connector for a 100-Mbps fiber uplink. The fiber uplink port makes these switches perfect for connecting workgroups to fiber backbones. You can even use them for links between nodes up to 2 kilometers (1.2 mi.) apart.

All the switches support the most demanding multimedia and imaging applications, thanks to their nonblocking switching architecture and efficient store-and-forward switching method.

Unmanaged Palm-Sized Ethernet Switches support a MAC address table for 2000 addresses and a 1 MB shared port buffer.

The switches come with an external, autosensing power supply that includes a kit of three separate and detachable AC power adapters—a 2-prong adapter for U.S., a 3-prong adapter for U.K., and a 2-post adapter for continental Europe. An Allen wrench that enables you to remove one adapter so another can be installed is also included. Each adapter is mounted on a plastic base that slides into and out of the power supply.

Managed Palm-Sized Ethernet Switches

Fixed-Port and Modular Managed Palm-Sized Ethernet Switches provide full-featured management in a compact package.

Each switch combines autonegotiating Ethernet and Fast Ethernet ports and a fiber uplink. You can manage large groups of these switches from a central location, making them ideal for larger, more complex installations in SNMP-managed WANs.

The three fixed-port models are some of the smallest true managed switches available today. Each has seven 10-/100-Mbps RJ-45 ports and works with 100BASE-FX fiber optic cable. The LB9030A also accommodates one 100-Mbps multimode dual SC port, and the LB9031A features one 100-Mbps multimode dual ST port. The LB9032A has one 100-Mbps single-mode dual SC port.

Use the RJ-45 ports on the fixed-port switches for short-distance networking between offices, workgroups, and buildings. Connect via the fiber port for longer distances. The LB9030A and LB9031A support fiber connections up to 1.2 miles (1.9 km) over multimode fiber. The LB9032A handles distances up to 9.3 miles (15 km) over single-mode fiber.

If you need a more flexible configuration, order the modular switch (LBG1000A-R2). It has 24 10-/100-Mbps ports and two slots for Gigabit uplinks. Plus, it takes up only 1U of rack space. The power supply is built right into the unit.

Expand a network quickly with the modular switch's 24 RJ-45 ports. To link the switch to your WAN, install the 1000BASE-SX Fiber Module (LBG1001C).

Software management for Managed Palm-Sized Ethernet Switches is easy. They support SNMP and RMON as well as some Layer 3 capabilities. Manage the switches in-band across the network using any Web browser. Or manage them out-of-band via the RS-232 console port.

Using the switches' 802.3p Priority Queuing, give different priorities to different types of traffic. Traffic management, network segmentation, and network security also improve, thanks to 802.1Q Tagged VLAN support. The switches support IP multicast traffic and video multicasting or broadcasting via IGMP snooping and Multicast Filtering. Plus, they handle switch-to-switch trunking, port-mirroring, and monitoring for traffic snooping.

Wire-speed packet switching and packet-forwarding are also supported. 802.3x flow control and backpressure prevent overflow of data frames, for better traffic management when the network is congested. Front-panel LEDs enable you to check the status of each port.

The modular switch can be mounted in a 19" rack using the included rackmount kit.

LB8405A-R3: top: front view; bottom: rear view

The 8-port Palm-Sized Ethernet Switch (LB8408A-R3-US) supports autosensing, autonegotiating 10-/100-Mbps switching on its eight RJ-45 ports.

TECH SPECS

Approvals — FCC Part 15 Class B, CE, VCCI Class B
Distance (Maximum) — RJ-45 ports: 100 m (328 ft.) using 10BASE-T UTP CAT3, 4, 5 cable or 100BASE-TX UTP CAT5 or 5e cable;
On models with multimode ST® or SC ports: 2 km (1.2 mi.);
On LB9032A single-mode SC port: 20 km (12.4 mi.);
On LBG1001C Gigabit fiber ports: 220 m (721.7 ft.)
Duplex Support — Half- and full-duplex, autonegotiating
Forwarding Rate — 10 Mbps: 14,880 pps; 100 Mbps: 148,800 pps; 1000 Mbps: 1,488,000 pps
MAC Addresses — LB8405A-R3, LB8406A, LB9005A-FO-R2, LB8408A-R3, LB8415A, LB8418A, LBG1000A-R2: 2K, LB9030A–LB9032A: 1 K
Standards — IEEE 802.3, IEEE 802.3u, IEEE802.3z, IEEE 802.3ab, IEEE 802.1d
Switching Method — Store and forward
VLAN Support — LB9030A–LB9032A: Port-based VLAN and 802.1Q Tagged VLAN;
LBG1000A-R2: IEEE 802.1Q Tagged VLAN, up to 8 groups
Connectors — LB8405A-R3, LB8405A-R3-US: (5) RJ-45;
LB8406A, LB8406A-US: (4) RJ-45, (1) pair of ST;
LB9005A-FO-R2, LB9005A-FO-R2-US: (4) RJ-45, (1) pair of SC;
LB8408A-R3: (8) RJ-45;
LB8415A: (7) RJ-45, (1) pair of ST;
LB8418A: (7) RJ-45, (1) pair of SC;
LB9030A, LB9032A: (7) RJ-45, (2) SC;
LB9031A: (7) RJ-45, (2) ST®;
LBG1000A-R2: (24) RJ-45;
LBG1001C: (2) SC
Indicators — LB8405A-R3, LB8406A, LB9005A-FO-R2, LB8408A-R3, LB8415A, LB8418A, LB8408A-R3-US, LB8415A-US, LB8418A-US, LB8422A-US–LB8424A-US: Per unit: (1) Power;
Per port: (1) LNK/ACT;
LB9030A–LB9032A: Per Unit LEDs: (1) Power;
Per 10-/100-Mbps port LEDs: (1) TX: 100-Mbps Speeds, (1) Link, (1) TC, (1) Collision, (1) RX, (1) Duplex;
LBG1000A-R2: Per unit LEDs: (1) Power;
Per 10-/100-Mbps port LEDs: (1) LNK, (1) ACT
Operating Temperature — Operating: 32 to 104°F (0 to 40°C);
Storage: -13 to +158°F (-25 to +70°C)
Relative Humidity — Up to 90%, noncondensing
Power — LB8405A-R3, LB8406A, LB9005A-FO-R2, LB8408A-R3, LB8415A, LB8418A: 100–240 VAC, 50–60 Hz, external supply with plugs for US, UK, EU, and South Africa;
LB8405A-R3-US, LB8406A-US, LB8407A-US, LB8408A-R3-US, LB8415A-US, LB8418A-US, LB8422A-US–LB87424A-US: 110-VAC wallmount power supply;
LB9030A–LB9032A: 100–240 VAC, 60–50 Hz, autosensing, external;
LBG1000A-R2: 100–250 VAC, 47–63 Hz, autosensing, internal
Size — LB8405A-R3, LB8406A, LB9005A-FO-R2, LB8408A-R3, LB8415A, LB8418A, LB8408A-R3-US, LB8415A-US, LB8418A-US, LB8422A-US–LB8424A-US: 1.1"H x 6.3"W x 3.2"D (2.8 x 16 x 8.1 cm);
LB9030A–LB9032A: 1.4"H x 8"W x 5.3"D (3.6 x 20.3 x 13.5 cm);
LBG1000A-R2: 1.75"H (1U) x 17.3"W x 9.25"D (4.4 x 43.9 x 23.5 cm)
Weight — LB8405A-R3, LB8406A, LB9005A-FO-R2, LB8408A-R3, LB8415A, LB8418A,LB8408A-R3-US, LB8415A-US, LB8418A-US, LB8422A-US–LB8424A-US: 0.9 lb. (0.4 kg);
LB9030A–LB9032A: 3.5 lb. (1.6 kg);
LBG1000A-R2: 7.5 lb. (3.4 kg)

Item	Code
Palm-Sized Ethernet Switches, Unmanaged	
5-Port	
100–240-VAC External Power Supply	
(5) RJ-45	**LB8405A-R3**
(4) RJ-45, (1) ST	**LB8406A**
(4) RJ-45, (1) SC	**LB9005A-FO-R2**
110-VAC Wallmount Power Supply	
(5) RJ-45	**LB8405A-R3-US**
(4) RJ-45, (1) ST, Multimode, 2 km	**LB8406A-US**
(4) RJ-45, (1) SC, Multimode, 2 km	**LB9005A-FO-R2-US**
(4) RJ-45, (1) SC, Single-Mode, 20 km	**LB8407A-US**
8-Port	
100–240-VAC External Power Supply	
(8) RJ-45	**LB8408A-R3**
(7) RJ-45, (1) SC, Multimode, 2 km	**LB8415A**
(7) RJ-45, (1) ST, Multimode, 2 km	**LB8418A**
110-VAC Wallmount Power Supply	
(8) RJ-45	**LB8408A-R3-US**
(7) RJ-45, (1) ST, Multimode, 2 km	**LB8415A-US**
(7) RJ-45, (1) SC, Multimode, 2 km	**LB8418A-US**
(7) RJ-45, (1) SC, Single-Mode, 20 km	**LB8423A-US**
(6) RJ-45, (2) ST, Multimode, 2 km	**LB8422A-US**
(6) RJ-45, (2) SC, Multimode, 2 km	**LB8421A-US**
(6) RJ-45, (2) SC, Single-Mode, 20 km	**LB8424A-US**
Palm-Sized Ethernet Switches, Managed	
Fixed-Port, (7) 10-/100-Mbps RJ-45 Ports plus	
(1) 100-Mbps Multimode SC Port, 2 km	**LB9030A**
(1) 100-Mbps Multimode ST Port, 2 km	**LB9031A**
(1) 100-Mbps Single-Mode SC Port, 15 km	**LB9032A**
Modular, (24) 10-/100-Mbps RJ-45 Ports plus	
(2) Slots for Optional 1000BASE-SX Fiber Modules	**LBG1000A-R2**
1000BASE-SX Fiber Module for LBG1000A-R2	**LBG1001Cw**